

**REMARKS**

This is a full and timely response to the non-final Office Action (Paper No. 5) mailed by the U.S. Patent and Trademark Office on December 31, 2002. Upon entry of the attached amendments, Claims 1 - 25 remain pending in the present application. Claims 16 - 25 have been added. The subject matter of claims 16 - 25 is disclosed in at least Figures 3 - 6 of the originally submitted application and is described in the corresponding portion of the detailed description. Consequently, Applicant submits that the new claims add no new matter to the present application. Applicant further submits that claims 16 - 25 are allowable over the cited references for at least the reason that the cited references do not suggest using a source node to identify a preferred data route for transferring data from the source node to the destination node. Applicant requests entry of the amendments. In view of the foregoing amendments and the following remarks, reconsideration and allowance of the present application and claims are respectfully requested.

**Response to 35 U.S.C. §103 Rejections – Claims 1 - 15**

**A. Statement of the Rejection**

Claims 1 - 15 presently stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,721,819 to Galles *et al.*, hereafter *Galles*.

Applicant respectfully traverses the rejection of claims 1 - 15.

For at least the reasons set forth herein, Applicant respectfully requests reconsideration and withdrawal of these rejections.

**B. Discussion of the Rejection**

Applicant respectfully traverses the rejection of claims 1 - 15 for at least the reason that *Galles* fails to disclose, teach, or suggest each element and/or method step in the claims. The Office's rejection alleges that it would have been obvious to a skilled artisan, given the teachings of *Galles*, to disclose a hop count in general. (Office Action, p. 3, lines 1-3.) However, Applicant notes that the claimed invention, as recited in Applicant's independent claims 1, 6, and 11, includes elements and/or method steps, in addition to the limitation of using "a current hop count," that are not addressed in the rejection. Significantly, these non-addressed elements and/or method

steps are not disclosed, taught, or suggested by *Galles*. Furthermore, these non-addressed elements and/or method steps are not obvious in light of the apparent teachings of *Galles*. Accordingly, it is respectfully asserted that the Office Action mailed December 31, 2002 fails to meet the burden of establishing a *prima facie* case of obviousness.

Moreover, the Office Action mailed December 31, 2002 rejects independent claims 6 and 11 along with independent claim 1 by generally referring to the apparent disclosure of source logic, routing logic, and destination logic within *Galles*. Applicant respectfully traverses this summary application of *Galles* in rejecting the claims. Claim 1 is a system claim. Claim 6 recites elements in means-plus-function format. Claim 11 is a method claim. The general allegation that it would have been obvious to a skilled artisan, prior to Applicant's invention, given the teachings of *Galles*, "to disclose a hop count in general" fails to allege that each claim element and/or method step and its limitations as recited in Applicant's claims are disclosed in the reference. Consequently, the rejection of these claims is improper. For at least this separate and independent reason, Applicant respectfully submits that the present Office Action rejection is improper. Accordingly, for at least this reason, Applicant respectfully requests that the Office reconsider and withdraw the rejection.

In addition to the failures of the Office's claim rejection to establish a *prima facie* case of obviousness and to address each element and/or method step of the claims, Applicant notes that there are substantial differences between the system apparently disclosed in *Galles* and Applicant's claimed invention. These differences would necessitate significant changes to both the architecture and operation of the network apparently disclosed in *Galles* before the network of *Galles* could operate in the manner of Applicant's claimed system.

By way of example, the claimed invention recites source logic in the source node to identify a data route from the source node to the destination node. In contrast, *Galles* appears to identify a data route via data vectors stored in a routing table associated with each respective node.

By way of further example, the claimed invention attaches at least one destination port value and a current hop count to a data packet to direct the transfer of data to the next node in the data route. In contrast, *Galles* apparently discloses

sequentially modifying the position of data vector values in each respective routing table to identify both an ingress and an egress port for directing data transfers.

Furthermore, each node in the network apparently disclosed in *Galles* receives and processes a plurality of data vectors before a determination can be made whether the present node is an intermediate node or the destination node. In contrast, the claimed invention can make an immediate determination whether the received data is intended for processing by the present node.

Because each of the above-mentioned differences is substantial and would require significant and non-obvious modifications to the network of *Galles* before *Galles* could operate in accordance with the Applicant's claimed invention, Applicant submits that *Galles* does not render Applicant's claimed invention obvious to a skilled artisan.

The Federal Circuit has repeatedly stated, "[m]odification unwarranted by the disclosure of a reference is improper." *Carl Schenck, A.G. v. Nortron Corp.*, 713 F.2d 782, 218 U.S.P.Q. 698, 702 (Fed. Cir. 1983). In this regard, "[t]he mere fact that the prior art may be modified in the manner suggested by the [Office action] fails to make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 972 F.2d 1260, 1266, 23 U.S.P.Q.2d 1780 (Fed Cir. 1992).

Every invention contains a recitation of elements. Many inventions can be categorized as a new combination of well-known elements. When new combinations are analyzed on an element-by-element basis, each of the elements may already be known. If merely proving that each element of a pending claim were well-known was enough to render the claim obvious, nothing would be patentable.

In the present rejection, the Office Action simply implies, with no reasoned analysis, that one skilled in the art would be motivated to modify *Galles* to reach Applicant's claimed invention. Applicant has reviewed *Galles* and can find no evidence of a suggestion or motivation to modify the network architecture of *Galles* to reach the Applicant's claimed invention. Because, a *prima facie* case of obviousness is established only when there is proper motivation to substitute, modify, or add the particular missing element from a reference, Applicant submits that the Office Action has failed to establish a proper *prima facie* case of obviousness.

**1. Claims 1 - 5**

Turning now to the claims, claims 1 - 5 presently stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Galles*. Applicant respectfully traverses the rejection of claims 1 - 5 for at least the reason that *Galles* fails to disclose, teach, or suggest each element and/or method limitation in the claims.

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, e.g., *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

For convenience of analysis, independent claim 1 is repeated below in its entirety.

1. A data communication system, comprising:  
a number of nodes interconnected in a network, the nodes including a source node, a destination node, and at least one intermediate node;  
***source logic in the source node to identify a data route from the source node to the destination node*** through the at least one intermediate node, ***the data route being specified by a sequence of at least one destination port value and a current hop count that are attached to a data packet*** to be transmitted from the source node to the destination node;  
routing logic in the at least one intermediate node to route the data packet along the data route; and  
destination logic in the destination node to detect a final destination of the data packet.

(Applicant's independent Claim 1 - *Emphasis added.*)

Applicant respectfully asserts that *Galles* fails to disclose, teach, or suggest at least the emphasized element and its limitations as shown above. Consequently, claim 1 is allowable.

In this regard, the Office's rejection of claim 1 alleges that *Galles* discloses source logic, routing logic, and destination logic. Significantly, the rejection does not allege that *Galles* discloses, teaches, or suggests Applicant's claimed "***source logic in the source node to identify a data route from the source node to the destination node*** through the at least one intermediate node, ***the data route being specified by a***

*sequence of at least one destination port value and a current hop count that are attached to a data packet* to be transmitted from the source node to the destination node.” Consequently, the rejection is improper and should be withdrawn.

As admitted by the Office, *Galles* fails to show “a current hop count with respect to the source logic used to identify a route from source node to destination node that is attached to a data packet to be transmitted.” (Emphasis added.)

Applicant notes that claim 1 recites more than a current hop count and in fact *Galles* fails to disclose, teach, or suggests Applicant’s claimed “*source logic in the source node to identify a data route from the source node to the destination node* through the at least one intermediate node, *the data route being specified by a sequence of at least one destination port value and a current hop count that are attached to a data packet* to be transmitted from the source node to the destination node.” Specifically, *Galles* fails to disclose, teach, or suggest identifying a “data route being specified by a sequence of at least one destination port value and a current hop count.” Furthermore, *Galles* fails to disclose, teach, or suggest attaching the sequence “to a data packet.” The source logic and its specific limitations as recited in claim 1 cannot be ignored. Because *Galles* fails to disclose, teach, or suggest at least Applicant’s claimed source logic and because Applicant’s claimed source logic and its recited limitations are not suggested by *Galles*, Applicant submits that claim 1 is allowable over *Galles*.

Because independent claim 1 is allowable, as argued above, dependent claims 2 - 5 are also allowable. *See In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Applicant respectfully requests that the rejection of claims 2 - 5 also be withdrawn.

## **2. Claims 6-10**

Claims 6 - 10 presently stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Galles*. Applicant respectfully traverses the rejection of claims 6 - 10 for at least the reason that *Galles* fails to disclose, teach, or suggest each element and/or method limitation in the claims.

For convenience of analysis, independent claim 6 is repeated below in its entirety.

6. A data communication system, comprising:  
a number of nodes interconnected in a network, the nodes including a source node, a destination node, and at least one intermediate node;

***path identification means in the source node for identifying a data route from the source node to the destination node through the at least one intermediate node, the data route being specified by a sequence of at least one destination port value and a current hop count that are attached to a data packet to be transmitted from the source node to the destination node;***

routing means in the at least one intermediate node for routing the data packet along the data route; and

destination means in the destination node for detecting an arrival of the data packet at the destination node.

(Applicant's independent Claim 6 - *Emphasis added.*)

Applicant respectfully asserts that *Galles* fails to disclose, teach, or suggest at least the emphasized element and its limitations as shown above. Consequently, claim 6 is allowable.

In this regard, the Office's rejection of claim 6 alleges that *Galles* discloses source logic, routing logic, and destination logic. Significantly, the rejection does not allege that *Galles* discloses, teaches, or suggests Applicant's claimed "***path identification means in the source node for identifying a data route from the source node to the destination node through the at least one intermediate node, the data route being specified by a sequence of at least one destination port value and a current hop count that are attached to a data packet to be transmitted from the source node to the destination node.***" Consequently, the rejection is improper and should be withdrawn.

As admitted by the Office, *Galles* fails to show "a current hop count with respect to the source logic used to identify a route from source node to destination node that is attached to a data packet to be transmitted." (Emphasis added.)

Applicant notes that claim 6 recites more than a current hop count and in fact *Galles* fails to disclose, teach, or suggests Applicant's claimed "***path identification means in the source node for identifying a data route from the source node to the destination node through the at least one intermediate node, the data route being specified by a sequence of at least one destination port value and a current hop count that are***

*attached to a data packet* to be transmitted from the source node to the destination node.” Specifically, *Galles* fails to disclose, teach, or suggest “identifying a data route from the source node to the destination node ... the data route being specified by a sequence of at least one destination port value and a current hop count.”

Furthermore, *Galles* fails to disclose, teach, or suggest that the “sequence of at least one destination port value and a current hop count [that] are attached to a data packet.” The path identification means and its specific limitations as recited in claim 6 cannot be ignored. Because *Galles* fails to disclose, teach, or suggest at least Applicant’s claimed path identification means and because Applicant’s claimed path identification means and its recited limitations are not suggested by *Galles*, Applicant submits that claim 6 is allowable over *Galles*.

As a separate and independent basis for the patentability of claim 6, claim 6 sets forth elements using means-plus-function language. Pursuant to 35 U.S.C. §112(6), a claim element recited in means-plus-function format “shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. §112, ¶ 6. The Federal Circuit has clearly endorsed this statutory mandate by holding that claims interpreted under 35 U.S.C. §112, paragraph 6, are limited to the corresponding structure disclosed in the specification and its equivalents. *Kahn v. General Motors Corp.* 135 F.3d 1472, 45 U.S.P.Q.2d 1608 (Fed. Cir. 1998).

There should be no question that the elements recited in claim 6 are to be construed pursuant to 35 U.S.C. §112, paragraph 6. In *Greenberg v. Ethicon Endo-Surgical Inc.*, 91 F.3d 1580, 39 U.S.P.Q. 2d 1783 (Fed. Cir. 1996), the Federal Circuit stated that the use of “means for” language generally invokes 112(6). Indeed, only if means-plus-function claim elements recite sufficient structure to carry out the function are they taken out of the gambit of 35 U.S.C. §112, paragraph 6. *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 41 U.S.P.Q.2d 1001 (Fed. Cir. 1996).

Indeed, the Federal Circuit reiterated in *Sage Products, Inc. v. Devon Industries, Inc.*, 126 F.3d 1420, 44 U.S.P.Q.2d 1103 (Fed. Cir. 1998) that “the use of the word ‘means,’ which is part of the classic template for functional claim elements, gives rise to ‘a presumption’ that the inventor used the term advisedly to invoke the statutory mandates for means-plus-function clauses.” Ultimately, the Court in *Sage* construed the relevant claim elements under 35 U.S.C. §112(6), because ‘means’ were

recited, and the claim elements did not “explicitly recite[s] the structure, material, or acts needed to perform the [recited] functions. *Sage* at p. 1428. The Federal Circuit further acknowledged this presumption in *Al-Site Corp. v. VSI International, Inc.*, 174 F.3d 1308, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999).

Thus, claim elements expressed in “means” plus function format are construed in accordance with 35 U.S.C. §112, paragraph 6, as set forth above, and as further described in *In re Donaldson* 16 F.3d 1189, 29 U.S.P.Q.2d 1845 (Fed. Cir. 1994)(*en banc*). Therefore, the various “means” elements must be construed in accordance with the structure set forth in the present specification.

In this regard, Applicant notes that, in *In re Donaldson*, The Board of Patent Appeals and Interferences advanced the legal proposition that “limitations appearing in the specification are *not* to be read into the claims of an application.” *In re Donaldson* at 1848. This argument, however, was rejected by the Federal Circuit, which held, as a matter of law, that “one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure ... described therein, and equivalents thereof. *In re Donaldson* at 1848. Furthermore, the holding in *In re Donaldson* does not conflict with the principle that claims are to be given their broadest reasonable interpretation during prosecution. *In re Donaldson* at 1850.

The means-plus-function elements of claim 6 must be construed differently than the corresponding elements of the other claims. Therefore, the rejection of claim 1, for example, does not necessarily apply to claim 6. The Office Action, however, failed to differentiate the elements of Applicant’s separate claims in this way. For at least this reason, Applicant submits that the rejection of claim 6 is improper and should be withdrawn, as the rejection is incomplete and legally deficient.

In addition, the structure disclosed in the present specification that corresponds to the various means elements is distinct from that disclosed, and in fact is not shown at all in *Galles*. For at least this additional reason, Applicant submits that the rejection of claim 6 should be withdrawn, as claim 6 patently defines over *Galles*. Accordingly, Applicant’s independent claim 6 is allowable for this separate and independent reason and the rejection of claim 6 should be withdrawn.



Because independent claim 6 is allowable, as argued above, dependent claims 7 - 10 are also allowable. *See In re Fine, supra.* Accordingly, Applicant respectfully requests that the rejection of claims 7 - 10 also be withdrawn.

### 3. Claims 11-15

Claims 11 - 15 presently stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Galles*. Applicant respectfully traverses the rejection of claims 11 - 15 for at least the reason that *Galles* fails to disclose, teach, or suggest each element and/or method limitation in the claims.

For convenience of analysis, independent claim 11 is repeated below in its entirety.

11. A method for data communications, comprising the steps of:

***generating a data packet*** to transmit from a source node to a destination node through at least one intermediate node in a network;

***identifying a data route*** from the source node to the destination node through the at least one intermediate node, ***the data route being specified by a sequence of at least one destination port value and a current hop count that are attached to the data packet*** to be transmitted from the source node to the destination node;

routing the data packet along the data route in the at least one intermediate node; and

detecting an arrival of the data packet in the destination node.

(Applicant's independent Claim 11 - *Emphasis added.*)

Applicant respectfully asserts that *Galles* fails to disclose, teach, or suggest at least the emphasized elements and their limitations as shown above. Consequently, claim 11 is allowable.

In this regard, the Office's rejection of claim 11 alleges that *Galles* discloses source logic, routing logic, and destination logic. Significantly, the rejection does not allege that *Galles* discloses, teaches, or suggests Applicant's claimed method step of "***generating a data packet . . .***" Furthermore, the rejection does not allege that *Galles* discloses, teaches, or suggests Applicant's claimed method step of "***identifying a data route*** from the source node to the destination node through the at least one

intermediate node, *the data route being specified by a sequence of at least one destination port value and a current hop count that are attached to the data packet* to be transmitted from the source node to the destination node.” Consequently, the rejection is improper and should be withdrawn.

As admitted by the Office, *Galles* fails to show “a current hop count with respect to the source logic used to identify a route from source node to destination node that is attached to a data packet to be transmitted.” (Emphasis added.) Applicant notes that claim 11 recites more than a current hop count and in fact *Galles* fails to disclose, teach, or suggests Applicant’s claimed “method step of “*generating a data packet . . .*” In addition, *Galles* fails to disclose, teach, or suggests Applicant’s claimed method step of “*identifying a data route* from the source node to the destination node through the at least one intermediate node, *the data route being specified by a sequence of at least one destination port value and a current hop count that are attached to the data packet* to be transmitted from the source node to the destination node.” More specifically, *Galles* fails to disclose, teach, or suggest “identifying a data route being specified by a sequence of at least one destination port value and a current hop count.” Furthermore, *Galles* fails to disclose, teach, or suggest that the “*sequence of at least one destination port value and a current hop count [that] are attached to the data packet*” The source logic and its specific limitations as recited in claim 11 cannot be ignored. Because *Galles* fails to disclose, teach, or suggest at least Applicant’s claimed method steps and because Applicant’s claimed method steps and their respective limitations are not suggested by *Galles*, Applicant submits that claim 11 is allowable over *Galles*.

Because independent claim 11 is allowable, as argued above, dependent claims 12 - 15 are also allowable. *See In re Fine, supra*. Accordingly, Applicant respectfully requests that the rejection of claims 12 - 15 also be withdrawn.

**CONCLUSION**

Claims 1 - 25 remain pending in the present application. Claims 16 – 25 have been added. For at least the foregoing reasons, Applicant respectfully requests that the outstanding rejection of claims 1 – 15 be withdrawn and that pending claims 1 – 25 of this application be allowed to issue. If the Examiner has any comments regarding Applicant's response or believes that a teleconference would expedite prosecution of the application, Applicant requests that the Examiner telephone Applicant's undersigned attorney.

Respectfully submitted,

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